NOTICE

All drawings located at the end of the document.

REF: 02-RF-01421; JLB-035-02

ENVIRONMENTAL RESTORATION
RFCA STANDARD OPERATING PROTOCOL
FOR ROUTINE SOIL REMEDIATION
FY02 NOTIFICATION #02-04
IHSS GROUPS 300-6, 500-7, AND 600-1

June 2002

1/25

DOCUMENT CLASSIFICATION
REVIEW WAIVER PER
CLASSIFICATION OFFICE

ADMIN RECORD
IA-A-001013

ENVIRONMENTAL RESTORATION
RFCA STANDARD OPERATING PROTOCOL
FOR ROUTINE SOIL REMEDIATION
FY02 NOTIFICATION #02-04
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Approval received from the Colorado Department of Public Health and Environment
June 19, 2002
Approval letter contained in the Administrative Record

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ACRONYMS

AL	action level
ALARA	as low as reasonably achievable
D&D	Decontamination and Decommissioning
COC	contaminant of concern
cy	cubic yard
EDDIE	Environmental Data Dynamic Information Exchange
ER	Environmental Restoration
ER RSOP	Environmental Restoration RSOP for Routine Soil Remediation
FY	Fiscal Year
IA	Industrial Area
IASAP	Industrial Area Sampling and Analysis Plan
IHSS	Individual Hazardous Substance Site
PAC	Potential Area of Concern
PCB	polychorinated biphenyl
pCi/g	picocuries per gram
PCOC	potential contaminant of concern
POC	Point of Compliance
POE	Point of Evaluation
RCRA	Resource Conservation and Recovery Act
RFCA	Rocky Flats Cleanup Agreement
RFETS	Rocky Flats Environmental Technology Site
RISS	Remediation, Industrial D&D and Site Services
RSOP	RFCA Standard Operating Protocol
SVOC	semivolatile organic compound
UBC	Under Building Contamination
µg/L	micrograms per liter
VOC	volatile organic compound

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1.0 INTRODUCTION

This Environmental Restoration (ER) Rocky Flats Cleanup Agreement (RFCA) Standard Operating Protocol (RSOP) for Routine Soil Remediation (ER RSOP) (DOE 2002) Fiscal Year (FY)02 Notification includes the notification to remediate Individual Hazardous Substance Sites (IHSSs), Potential Areas of Concern (PACs), and Under Building Contamination (UBC) Sites at the Rocky Flats Environmental Technology Site (RFETS) Industrial Area (IA) during FY02 The purpose of this Notification is to invoke the ER RSOP for the IHSSs listed in Table 1 Activities specified in the ER RSOP are not reiterated here, however, deviations from the ER RSOP are noted where appropriate

Soil with contaminant concentrations greater than RFCA Tier I Action Levels (ALs) and associated debris will be removed in accordance with RFCA and the ER RSOP Soil with contaminant concentrations less than RFCA Tier I ALs will be evaluated for additional removal through the consultative process using stewardship and as low as reasonably achievable (ALARA) considerations (Sections 5 4 and 5 5 of the ER RSOP)

Proposed remediation sites covered under ER RSOP Notification #02-04 are listed in Table 1 and the locations are shown on Figure 1

Table 1
FY02 Potential Remediation Areas

IHSS Group	IHSS/PAC/UBC Site			
300-6	300-702 – Pesticide Shed	Pesticides/Herbicides	Surface Soil	<1cy
500-7	500-907 – Tanker Truck Release of Hazardous Waste from Tank 231B	Radionuclides Metals Semivolatile organic compounds (SVOCs) Polychlorinated biphenyls (PCBs) Volatile organic compounds (VOCs)	Surface and Subsurface Soil Subsurface Soil	<1cy
600-1	600-1001 – Temporary Waste Storage Building 663	VOCs SVOCs	Surface Soil	<1cy

2.0 IHSS GROUP 300-6

IHSS Group 300-6 includes PAC 300-702 – Pesticide Shed and its location is shown on Figure 2

2.1 Potential Contaminants of Concern

Potential contaminants of concern (PCOCs) at IHSS Group 300-6 were determined based on process knowledge and indicate pesticides and herbicides may be present in surface soil (DOE 1992-2001)

2.2 Project Conditions

The following conditions are present at this site

- A pesticide storage shed is present in this PAC

2.3 Remediation Plan

The remediation plan for IHSS Group 300-6 includes removing contaminated soil to below Tier I ALs (Figure 2) and collecting confirmation samples in accordance with the Industrial Area Sampling and Analysis Plan (IASAP) (DOE 2001a)

It is anticipated that after remediation there will be areas with concentrations of organics greater than background plus two standard deviations or method detection limits, but below RFCA Tier II ALs, at this site

2.4 Stewardship Evaluation

Based on the PCOCs (Table 1 and Section 2 1) and the ER RSOP (DOE 2002), it is anticipated that all contamination above RFCA Tier I ALs will be remediated Figure 2 shows the potential remediation area Additional remediation to below Tier I ALs is not required by RFCA but will be evaluated using the consultative process

Because the full extent of excavation and remediation is not known at this time, an additional stewardship evaluation, using the consultative process, will be conducted during remediation A new map of residual contamination will be generated after remediation The following sections contain the stewardship evaluation

2.4.1 Proximity to Other Contaminant Sources

IHSS Group 300-6 is in the RFETS IA The nearest contaminant sources are within IHSS Group 300-1 This site, PCOCs, media of interest, and relationship to IHSS Group 300-6 are listed in Table 2 and shown on Figure 2

Table 2
Other Potential Contaminant Sources for IHSS Group 300-6

IHSS Group	PCOCs/COCs	Media	Distance from IHSS Group 300-6
300-1 – Oil Burn Pit, Lithium Metal Site, and Solvent Burning Grounds	Depleted Uranium Metals SVOCs VOCs	Surface Soil	Approximately 343 feet to the east

IHSS Group 300-1 does not have PCOCs similar to IHSS Group 300-6 and does not affect stewardship considerations at IHSS Group 300-6

2.4.2 Surface Water Protection

Surface water protection includes the following considerations

Is there a pathway to surface water from potential erosion to streams or drainages?

This site is in a flat-lying area not prone to erosion However, a northeast flowing drainage ditch is located north of the site.

Do characterization data indicate there are contaminants in surface soil?

There are no surface soil sampling locations near IHSS Group 300-6

Do monitoring results from Points of Evaluation (POEs) or Points of Compliance (POCs) indicate there are surface water impacts from the area under consideration?

There are no surface water POEs or POCs near IHSS Group 300-6 Therefore it is difficult to attribute potential surface water impacts to IHSS Group 300-6

Is the IHSS Group in an area with high erosion potential, based on the 100-Year Average Erosion Map?

Not applicable The 100-Year Average Erosion Map does not include areas in the IA

2.4.3 Monitoring

Monitoring includes the following considerations

Do monitoring results from POEs or POCs indicate there are groundwater impacts from the area under consideration?

There are no data from surrounding wells indicating groundwater was impacted at this site Well 63495 is upgradient of the site and well P119389 is downgradient

Can the impact be traced to a specific IHSS Group?

There are no data from surrounding wells indicating groundwater was impacted at this site

Are additional monitoring stations needed?

Not applicable

Can existing monitoring locations be deleted if additional remediation is conducted?

Not applicable

2.4.4 Stewardship Actions and Recommendations

The current stewardship actions and recommendations for IHSS Group 300-6 are as follows

- Implement near-term institutional controls until final closure and stewardship decisions are implemented, including the following

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  - Signs and barriers,
  - Restrictions on soil excavation, and
  - Soil excavations controlled through the Site Soil Disturbance Permit process

- Implement long-term stewardship actions, including the following
  - Federal ownership, and
  - Land use restrictions to prevent soil excavation Specific land use restrictions will be discussed in the Site Long-Term Stewardship Plan

These recommendations may change based on in-process remediation activities and other future RFETS remediation decisions

2.5 Accelerated Action Remediation Goals

ER RSOP remedial action objectives include the following

1 Provide a remedy consistent with the RFETS goal of protection of human health and the environment,

2 Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls, and

3 Minimize the spread of contaminants during implementation of accelerated actions

The accelerated action goals for IHSS Group 300-6 include the following

- Remove soil with contaminant concentrations greater than Tier I ALs (Figure 2)

2.6 Treatment

Not applicable

2.7 Project-Specific Monitoring

High-volume air samplers may be used at the remediation area consistent with work controls to determine airborne radioactivity concentrations Approximate locations of air samplers are shown on Figure 2

2.8 Resource Conservation and Recovery Act (RCRA) Units and Intended Waste Disposition

Not applicable

2.9 Administrative Record Documents

DOE, 1992-2001, Historical Release Report and Quarterly and Yearly Historical Release Report Updates, Rocky Flats Environmental Technology Site, Golden, Colorado

DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June

DOE, 2002, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation, Rocky Flats Environmental Technology Site, Golden, Colorado, January

2.10 Projected Schedule

Remediation, if required, of IHSS Group 300-6 is expected to begin in June 2002.

3.0 IHSS GROUP 500-7

IHSS Group 500-7 includes PAC 500-907 – Tanker Truck Release of Hazardous Waste from Tank 231B The location of IHSS Group 500-7 is shown on Figure 3

3.1 Potential Contaminants of Concern

PCOCs at IHSS Group 500-7 were determined based on process knowledge and indicate radionuclides, metals, PCBs may be present in surface soil along with VOCs in subsurface soil (DOE 1992-2001)

3.2 Project Conditions

The following conditions are present at this site

- The PAC is in a congested area of the Site

3.3 Remediation Plan

The remediation plan for IHSS Group 500-7 includes removing contaminated soil to below Tier I ALs (Figure 3) and collecting confirmation samples in accordance with the IASAP (DOE 2001a)

It is anticipated that after remediation there will be areas with concentrations of radionuclides, metals, PCBs, and VOCs greater than background plus two standard deviations or method detection limits, but below RFCA Tier II ALs at this site

3.4 Stewardship Evaluation

Based on the PCOCs (Table 3 and Section 3 1) and the ER RSOP (DOE 2002), it is anticipated that all contamination above RFCA Tier I ALs will be remediated Figure 3 shows the potential remediation area Additional remediation to below Tier I ALs is not required by RFCA but will be evaluated using the consultative process

Because the full extent of excavation and remediation is not known at this time, an additional stewardship evaluation, using the consultative process, will be conducted during remediation A new map of residual contamination will be generated after remediation The following sections contain the stewardship evaluation

3.4.1 Proximity to Other Contaminant Sources

IHSS Group 500-7 is in the RFETS IA Nearby potential contaminant sources, their PCOCs, media of interest, and relationship to IHSS Group 500-7 are listed in Table 3 and shown on Figure 3

Table 3
Other Potential Contaminant Sources for IHSS Group 500-7

IHSS Group	PCOCs/COCs	Media	Location with IHSS Group 500-7
500-1 – Valve Vaults 11, 12, and 13, Scrap Metal Storage Site, and North Site Chemical Storage Site	Radionuclides Metals VOCs	Surface and Subsurface Soil	Adjacent to the north
500-2 – Radioactive Site Building 551	Radionuclides Metals VOCs	Surface and Subsurface Soil	Approximately 70 feet to the southeast

Nearby IHSS Groups have PCOCs similar to, and in the same media as, IHSS Group 500-7 It is anticipated that after remediation of these IHSS Groups, they will have residual contamination in subsurface soil similar to the residual contamination anticipated at IHSS Group 500-7

3.4.2 Surface Water Protection

Surface water protection includes the following considerations

Is there a pathway to surface water from potential erosion to streams or drainages?

This site is in a flat-lying area not prone to erosion However, two drainage ditches are located along the western and eastern perimeters of the site

Do characterization data indicate there are contaminants in surface soil?

There are no surface soil sampling locations near IHSS Group 500-7

Do monitoring results from POEs or POCs indicate there are surface water impacts from the area under consideration?

There are no surface water POEs or POCs near IHSS Group 500-7 Therefore it is difficult to attribute potential surface water impacts to IHSS Group 500-7

Is the IHSS Group in an area with high erosion potential, based on the 100-Year Average Erosion Map?

Not applicable The 100-Year Average Erosion Map does not include areas in the IA

3.4.3 Monitoring

Monitoring includes the following considerations

Do monitoring results from POEs or POCs indicate there are groundwater impacts from the area under consideration?

Groundwater monitoring results from Well P114789 indicate concentrations of several analytes above RFCA Tier II ALs Table 4 lists data from this well that exceed RFCA ALs

Table 4
Groundwater Exceedances Associated With IHSS Group 500-7

Analyte	Maximum Result (pCi/L)	Tier II AL (pCi/L)	Tier I AL (pCi/L)
Uranium-233/234	3 2	1 06	106
Uranium-238	2 5	0 768	76 8
Analyte	Maximum Result (µg/L)	Tier II AL (µg/L)	Tier I AL (µg/L)
bis(2-Ethylhexyl)phthalate	130	6	600
Carbon Tetrachloride	480	5	500
Tetrachloroethene	150	5	500
Trichloroethene	71	5	500

Can the impact be traced to a specific IHSS Group?

There are no data from surrounding wells indicating groundwater was impacted at this site Well P114789 is north of the site

Are additional monitoring stations needed?

Not applicable

Can existing monitoring locations be deleted if additional remediation is conducted?

Not applicable

3.4.4 Stewardship Actions and Recommendations

The current stewardship actions and recommendations for IHSS Group 500-7 are as follows

- Implement near-term institutional controls until final closure and stewardship decisions are implemented, including the following
  - Signs and barriers,
  - Restrictions on soil excavation, and
  - Soil excavations controlled through the Site Soil Disturbance Permit process
- Implement long-term stewardship actions, including the following

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- Federal ownership, and
- Land use restrictions to prevent soil excavation Specific land use restrictions will be discussed in the Site Long-Term Stewardship Plan

These recommendations may change based on in-process remediation activities and other future RFETS remediation activities

3.5 Accelerated Action Remediation Goals

ER RSOP remedial action objectives include the following

1 Provide a remedy consistent with the RFETS goal of protection of human health and the environment,

2 Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls; and

3 Minimize the spread of contaminants during implementation of accelerated actions

The accelerated action goals for IHSS Group 500-7 include the following·

- Remove soil with contaminant concentrations greater than Tier I ALs (Figure 3).

3.6 Treatment

Not applicable

3.7 Project-Specific Monitoring

High-volume air samplers may be used at the remediation area consistent with work controls to determine airborne radioactivity concentrations Approximate locations of air samplers are shown on Figure 3

3.8 RCRA Units and Intended Waste Disposition

Not applicable

3.9 Administrative Record Documents

DOE, 1992-2001, Historical Release Report and Quarterly and Yearly Historical Release Report Updates, Rocky Flats Environmental Technology Site, Golden, Colorado

DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June

DOE, 2002, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation, Rocky Flats Environmental Technology Site, Golden, Colorado, January

3.10 Projected Schedule

Remediation, if required, of IHSS Group 500-7 is expected to begin in June 2002

4.0 IHSS GROUP 600-1

IHSS Group 600-1 includes PAC 600-1001 – Temporary Waste Storage Building 663 The location of IHSS Group 600-1 is shown on Figure 4

4.1 Potential Contaminants of Concern

PCOCs at IHSS Group 600-1 were determined based on process knowledge and data collected during previous studies (DOE 1992-2001, 2001a, 2000) Results of previous sampling and analysis of surface soil near IHSS Group 600-1 (DOE 2000) indicate that radionuclides and metals were detected at concentrations greater than background plus two standard deviations, and SVOCs were detected in surface soil at concentrations greater than method detection limits SVOCs and VOCs were detected in subsurface soil at concentrations greater than RFCA Tier II ALs

4.2 Project Conditions

The following conditions are present at this site

- Building 662 and 663 (which will be removed by Remediation, Industrial Decontamination and Decommissioning [D&D] and Site Services [RISS] Facility D&D staff)
- Concrete slabs beneath Buildings 662 and 662, and
- Other small associated concrete slabs

4.3 Remediation Plan

The remediation plan for IHSS Group 600-1 includes the following

- Remove the concrete slabs (if not removed by RISS Facility D&D) and recycle in accordance with the RSOP for Recycling Concrete (DOE 1999), or dispose of,
- Remove sanitary sewer drains (if not removed by RISS Facility D&D),
- Remove structures and piping within 3 feet of current grade (if not removed by RISS Facility D&D),
- Remove soil with contaminant concentrations above RFCA Tier I ALs ,
- Remove contaminated soil to below RFCA Tier I ALs if indicated through the stewardship evaluation (Section 2 4), and
- Collect confirmation samples in accordance with the Industrial Area Sampling and Analysis Plan (IASAP) (DOE 2001)

It is anticipated that after remediation there will be areas with concentrations of metals, radionuclides, and organics greater than background plus two standard deviations or method detection limits, but below RFCA Tier II ALs, at this site Additionally, it is anticipated that there will be very few areas with concentrations above RFCA Tier II ALs.

4.4 Stewardship Evaluation

Based on the PCOCs (Table 5 and Section 4 1) and the ER RSOP (DOE 2002), it is anticipated that all contamination above RFCA Tier I ALs will be remediated Figure 4 shows the potential remediation area Additional remediation to below Tier I ALs is not required by RFCA but will be evaluated using the consultative process

Because the full extent of excavation and remediation is not known at this time, an additional stewardship evaluation, using the consultative process, will be conducted during remediation A new map of residual contamination will be generated after remediation The following sections contain the stewardship evaluation

4.4.1 Proximity to Other Contaminant Sources

IHSS Group 600-1 is in the RFETS IA Nearby potential contaminant sources, their PCOCs, media of interest, and relationship to IHSS Group 600-1 are listed in Table 5 and shown on Figure 4

Table 5
Other Potential Contaminant Sources for IHSS Group 600-1

IHSS Group	PCOCs/COCs	Media	Direction from IHSS Group 600-1
000-2 – OPWL	Radionuclides Metals VOCs	Subsurface Soil	Approximately 30 feet to the north
600-4 – Radioactive Site Building 444 Parking Lot	Radionuclides Metals VOCs	Surface and Subsurface Soil	Adjacent to the west

Nearby IHSS Groups have PCOCs similar to, and in the same media as, IHSS Group 600-1 It is anticipated that after remediation of these IHSS Groups, they will have residual contamination in subsurface soil similar to the residual contamination anticipated at IHSS Group 600-1

4.5 Surface Water Protection

Surface water protection includes the following considerations

Is there a pathway to surface water from potential erosion to streams or drainages?

This site is in a flat-lying area not prone to erosion There are no surface water features in the vicinity of IHSS Group 600-1

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Do characterization data indicate there are contaminants in surface soil?

Surface soil sampling results from IHSS Group 600-1 indicate americium and plutonium are present in concentrations greater than background plus two standard deviations and SVOCs are present in concentrations greater than method detection limit All analytes are well below RFCA Tier II ALs

Do monitoring results from POEs or POCs indicate there are surface water impacts from the area under consideration?

There are no surface water POEs or POCs near IHSS Group 600-1 Therefore it is difficult to attribute potential surface water impacts to IHSS Group 600-1

Is the IHSS Group in an area with high erosion potential, based on the 100-Year Average Erosion Map?

Not applicable The 100-Year Average Erosion Map does not include areas in the IA

4.5.1 Monitoring

Monitoring includes the following considerations

Do monitoring results from POEs or POCs indicate there are groundwater impacts from the area under consideration?

Groundwater monitoring results from Well P313589, south of the site, indicate concentrations of several analytes above RFCA Tier II ALs Uranium-233/234 and uranium-238 concentrations are greater than RFCA Tier II ALs Additionally, nickel concentrations exceeded the RFCA Tier II AL during the 1st quarter of 2001

Can the impact be traced to a specific IHSS Group?

Uranium-233/234 and uranium-238 are present in concentrations greater than RFCA Tier II ALs in water from Well P313589, downgradient of the site However, uranium was not found in surface or subsurface soil in concentrations greater than background plus two standard deviations Nickel was also found at concentrations greater than the RFCA Tier II ALs in water from this well, but was below background plus two standard deviations Although nickel concentrations for the 1st quarter of 2001 were slightly elevated they have been consistently below the RFCA Tier II AL since 1996 (DOE 2001b) Nickel was not found in concentrations greater than RFCA Tier II ALs in surface or subsurface soil

Are additional monitoring stations needed?

Not applicable

Can existing monitoring locations be deleted if additional remediation is conducted?

Not applicable

4.5.2 Stewardship Actions and Recommendations

The current stewardship actions and recommendations for IHSS Group 600-1 are as follows

- Implement near-term institutional controls until final closure and stewardship decisions are implemented, including the following
  - Signs and barriers,
  - Restrictions on soil excavation, and
  - Soil excavations controlled through the Site Soil Disturbance Permit process
- Implement long-term stewardship actions, including the following
  - Federal ownership, and
  - Land use restrictions to prevent soil excavation Specific land use restrictions will be discussed in the Site Long-Term Stewardship Plan

These recommendations may change based on in-process remediation activities and other future RFETS remediation activities

4.6 Accelerated Action Remediation Goals

ER RSOP remedial action objectives include the following

1 Provide a remedy consistent with the RFETS goal of protection of human health and the environment,

2 Provide a remedy that minimizes the need for long-term maintenance and institutional or engineering controls, and

3 Minimize the spread of contaminants during implementation of accelerated actions

The accelerated action goals for IHSS Group 600-1 include the following.

- Remove the concrete slabs (if not removed by RISS Facility D&D) and recycle in accordance with the RSOP for Recycling Concrete (DOE 1999), or dispose of,
- Remove sanitary sewer drains (if not removed by RISS Facility D&D),
- Remove structures and piping within 3 feet of current grade (if not removed by RISS Facility D&D),
- Remove soil with contaminant concentrations above RFCA Tier I ALs, and
- Remove contaminated soil to below RFCA Tier I ALs if indicated through the stewardship evaluation

4.7 Treatment

Not applicable

4.8 Project-Specific Monitoring

High-volume air samplers may be used at the remediation area consistent with work controls to determine airborne radioactivity concentrations Approximate locations of air samplers are shown on Figure 4

4.9 RCRA Units and Intended Waste Disposition

Not applicable

4.10 Administrative Record Documents

DOE, 1992-2001, Historical Release Report and Quarterly and Yearly Historical Release Report Updates, Rocky Flats Environmental Technology Site, Golden, Colorado

DOE, 1999, RFCA Standard Operating Protocol for Recycling Concrete, Rocky Flats Environmental Technology Site, Golden, Colorado, September

DOE, 2000, Industrial Area Data Summary Report, Rocky Flats Environmental Technology Site, Golden, Colorado, September

DOE, 2001, First Quarter RFCA Groundwater Monitoring Report, Rocky Flats Environmental Technology Site, Golden, Colorado, August

DOE, 2001, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June

DOE, 2002, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation, Rocky Flats Environmental Technology Site, Golden, Colorado, January

4.11 Projected Schedule

Remediation of IHSS Group 600-1 may begin in the 4th Quarter of FY02

5.0 REFERENCES

DOE, 1992 through 2001 Historical Release Report and, Quarterly and Yearly Historical Release Report Updates Rocky Flats Environmental Technology Site, Golden, Colorado

DOE, 1999, RFCA Standard Operating Protocol for Recycling Concrete, Rocky Flats Environmental Technology Site, Golden, Colorado, September

DOE, 2000, Industrial Area Data Summary Report, Rocky Flats Environmental Technology Site, Golden, Colorado, September

DOE, 2001a, Industrial Area Sampling and Analysis Plan, Rocky Flats Environmental Technology Site, Golden, Colorado, June

DOE, 2001b, First Quarter RFCA Groundwater Monitoring Report for Calendar Year 2001, Rocky Flats Environmental Technology Site, Golden, Colorado, August

DOE, 2002, Environmental Restoration RFCA Standard Operating Protocol for Routine Soil Remediation, Rocky Flats Environmental Technology Site, Golden, Colorado, January

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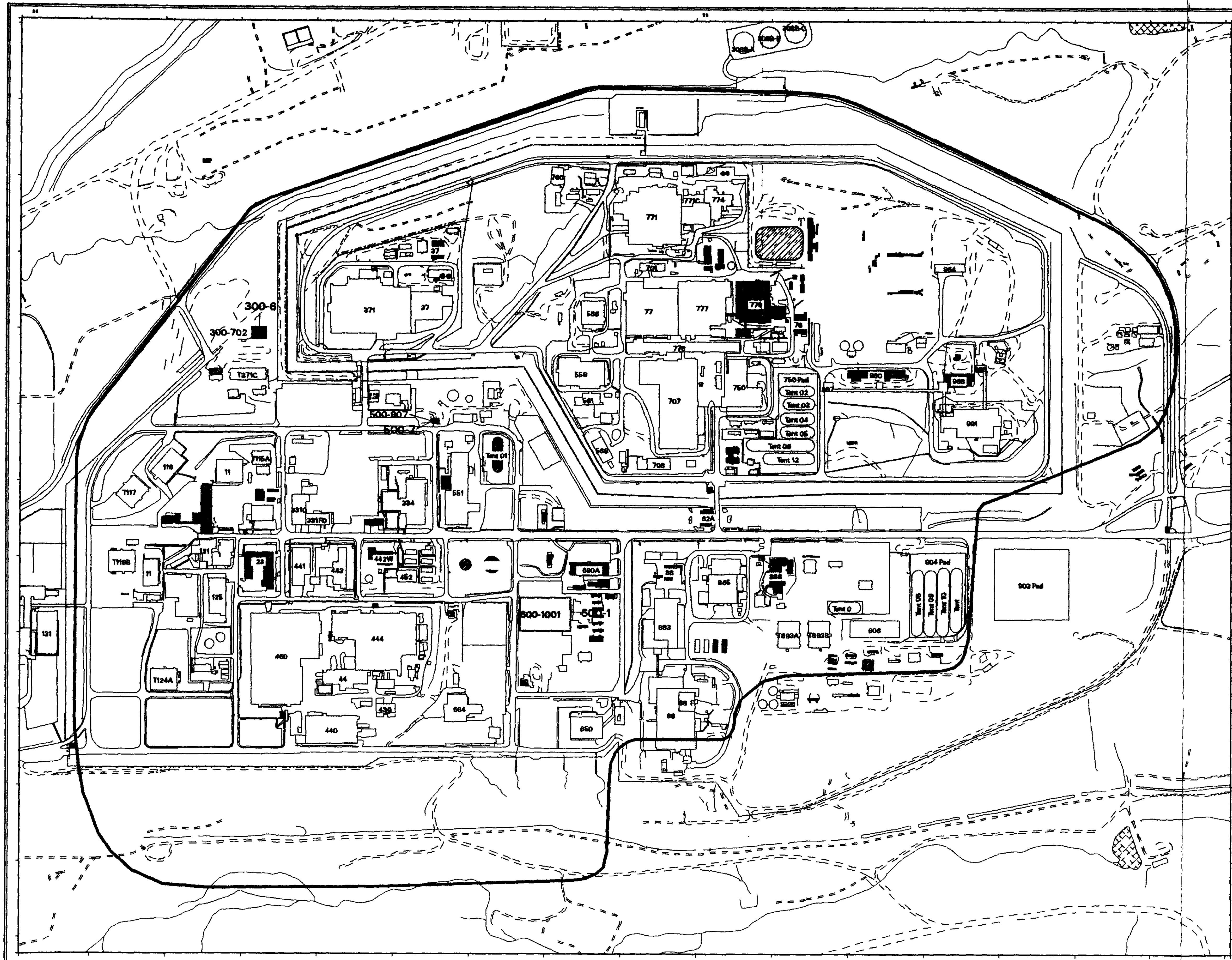

Figure 1
IA Groups Location Map

EXPLANATION

IHSS Groupings

- 300-6
- 500-7
- 600-1

Standard Map Features

- Buildings and other structures
- Demolished buildings
- Solar Evaporation Ponds (SEPs)
- Lakes and ponds
- Streams, ditches or ther drainage features
- Fences and ther ba lers
- Paved roads
- Dirt roads
- Industrial Area Operable Unit Boundary

DATA SOURCE BASE FEATURES:
PACs
Historical Release Report (HRR)
2nd Annual Update
Sept. 30, 1997
Individual Hazardous Substance Sites (IHSS)
DOE 1992, HRR Report and Subsequent Updates.
Buildings, fences, hydrography, roads and other structures from 1994 aerial fly-over data captured by EG&G RSL, Las Vegas.
Digitized from the orthophotographs. 1/95

Scale 1 6330
1 inch represents approximatel 52 fee

0 | 300 | 60

State Plane Coordinate Projection
Colorado Centr l Zone
Datum NAD27

U S Department f Energy
R ky Fl ts Environment l Technology Site

GIS Dept. 303-966-7707

Prepared by:
DynCorp

Prepared for:
KAISER HILL

June 03, 2002

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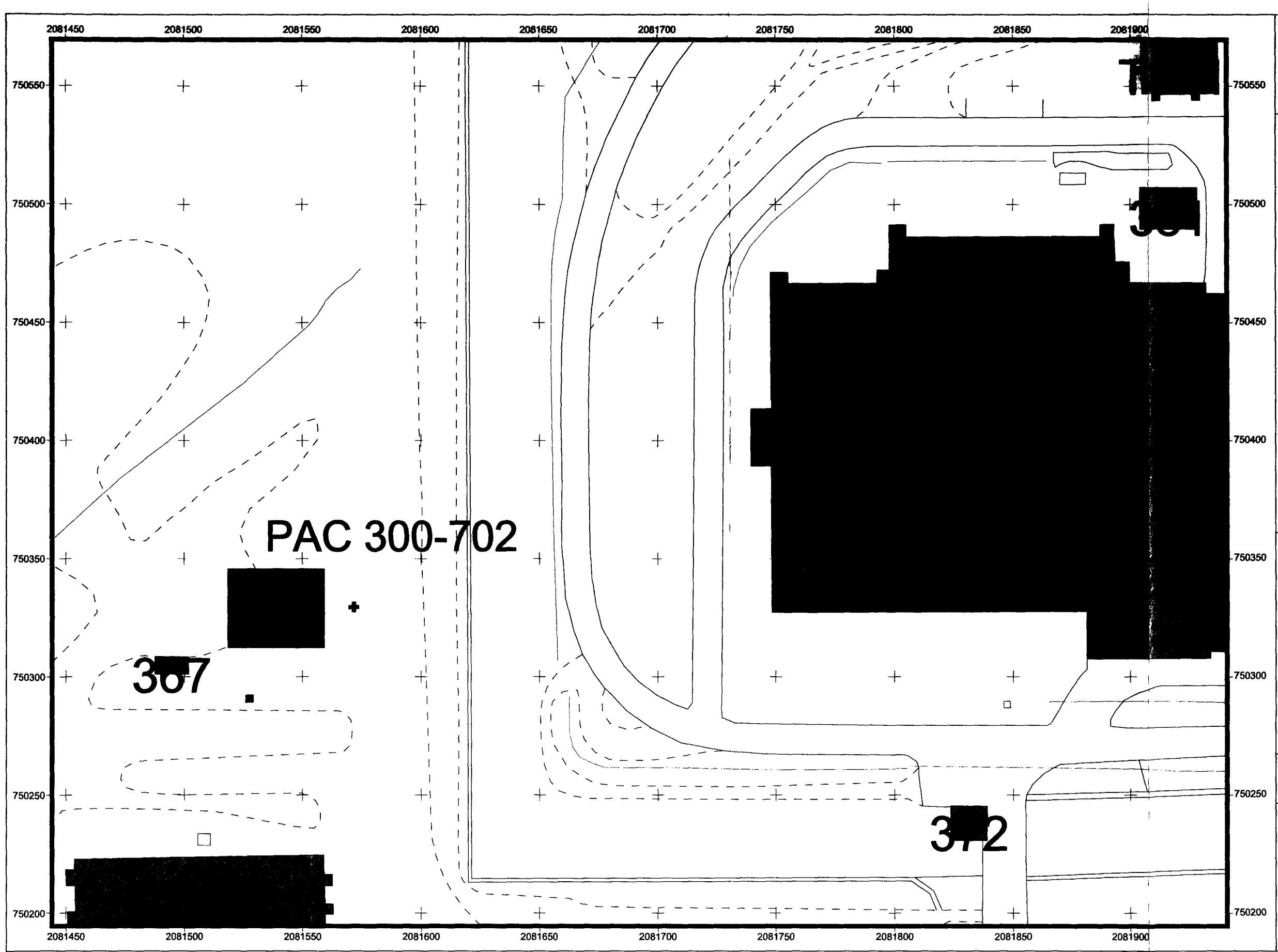

Figure 2
Potential Remediation Area
IHSS Group 300-6 (300-702)

KEY

- Potential Air Sampling Location
- Other IHSSs
- FY 2002 IHSS location
- FY 2002 PAC location
- FY 2002 UBC location
- Building/structure
- Paved area
- Dirt road
- Stream ditch or other drainage feature

Existing soil sampling locations (50-ft buffer)

- Both subsurface and surface soil
- Subsurface soil
- Surface soil

N

Scale = 1 900

20 0 20 40 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum NAD 27

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Rocky Flats Environmental Technology Site

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Figure 3
Potential Remediation Area
IHSS Group 500-7
(500-907)

KEY

- Potential Air Monitoring Location
- Other IHSSs
- FY 2002 IHSS location
- FY 2002 PAC location
- FY 2002 UBC location
- Building/structure
- Paved area
- Dirt road
- Stream ditch or other drainage feature

Existing soil sampling locations (50-ft buffer)

- Both subsurface and surface soil
- Subsurface soil
- Surface soil

N

Scale = 1 465

10 0 10 20 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum NAD 27

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Figure 4
Potential Remediation Area
IHSS Group 600 1
(600 1001)

KEY

- Potential Air Monitoring Location
- Other IHSSs
- FY 2002 IHSS location
- FY 2002 PAC location
- FY 2002 UBC location
- Building/structure
- Paved area
- Dirt road
- Stream ditch or other drainage feature

Existing soil sampling locations
(50-ft buffer)

- Both subsurface and surface soil
- Subsurface soil
- Surface soil

N

Scale 1 775

20 0 20 40 Feet

State Plane Coordinate Projection
Colorado Central Zone
Datum NAD 27

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